

REMARKS

Claims 1-19 are pending. Claim 1 is amended.

The rejection of claims 1-19 under 35 U.S.C. 103(a) as being unpatentable over Flick (US 6,392,534) in view of Kominami (US 6,785,595) is respectfully traversed.

Claims 1, 8, 15 recite a remote control system that includes a remote transmitter, a receiver module, and a control module. The receiver module and the control module are connected by a communication bus in a vehicle. The control module is in communication with at least one vehicle system. An activation signal is transmitted by the transmitter and received by the receiver module. A first message is transmitted along the communication bus from the receiver module to the control module. An acknowledgement message is transmitted along the communication bus from the control module to the receiver module. The first message is re-transmitted along the communication bus to the control module. A vehicle system command is initialized from the control module to the at least one vehicle system. Inadvertent activation of the at least one system is thereby prevented.

Flick describes a remote control system for a vehicle. The remote control system includes a remote transmitter 50 in communication with a remote function controller 23 disposed within the vehicle. The remote function controller 23 is connected to a communication bus 22 which runs throughout the vehicle to various security and convenience devices. The Office action states that Flick teaches transmitting a first message from the receiver module along the communication bus to the control module; however, Flick neither describes nor suggests these limitations. Rather, Flick describes the receiver 24 connected to controller 23 by a line other than the communication bus 22. The communication bus 22, as described in Flick, is coupled between the controller 23 and various other devices throughout the vehicle, and not to the receiver 24. This is shown in Fig. 1, of Flick, where the receiver 24 is not

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connected to the controller 23 via the communication bus 22, and as a result, a first message is not transferred along the communication bus 22 from the receiver 24 to the controller 23.

In regards to Kominami, an electronic control system is described for managing user preferences settings in a vehicle. Kominami describes a transfer of information from a computer 50 to a PDA 12 and then to a data controller 14 within a vehicle 10. The information transferred between the PDA 12 and the data controller 14 is performed wirelessly by an IR transceiver 18 within the PDA 12 and an IR transceiver 16 within the data controller 14. The Office action references Kominami, col. 5 lines 17-21, to suggest that an acknowledgement message from the control module is transmitted along the communication bus to the receiver module; however, Kominami states that a repeat message is transmitted between the transceivers, specifically, the transceiver 18 of the PDA 12 and the transceiver 16 of the vehicle 10 to acknowledge a successful transmission of data. This transmission is performed wirelessly between two devices, and not along a communication bus (see col. 5, lines 4-28). In the present invention, the communication (the request signal and the acknowledgement signal) is transmitted between the vehicle-based receiver and the vehicle-based controller of the electronic control module along a communication bus.

The Office action further references col. 5, lines 26-28, of Kominami, to suggest that the vehicle system command is initialized from the vehicle-based control module to at least one vehicle system and that the re-transmitting is performed to prevent inadvertent activation of the at least one activation system; however, col. 5 lines 26-28 provides no such indication. This reference section states "With that in Fig. 6, transmission of operation data to the PDA 12 from the vehicle 10 operates in a similar manner." Applicant is confused as to how this referenced section relates to the recited limitations that the Examiner has referenced. Applicant requests clarification as to this reference section and how it relates to the limitations. Applicant will address the general disclosure of Kominami in reference to the recited limitation of

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"preventing an inadvertent activation of said at least one vehicle system". In the present invention, the repeated transmitting of the request signal and acknowledgement signal is provided to avoid an erroneous message. An error message resulting in an inadvertent activation of a vehicle system such as a remote engine start operation which if unknown to the vehicle operator, may result in depletion of fuel within the vehicle. Kominami concerns the successful wireless transmission between the remote PDA and the receiver within the vehicle. Kominami does not address the issue with data transmission between a vehicle-based receiver and a vehicle-based control module along a communication bus. Moreover, Kominami does not even describe or suggest a communication bus, and therefore, there can be no suggestion to resolve the issue of an erroneous communication signal in a communication bus. Neither Flick nor Kominami describe or suggest, individually or in combination, the limitations of claim 1, 8, and 15. Therefore, claims 1, 8, and 15 are allowable.

Claims 2, 9, and 17 depend from claims 1, 8, and 15, respectively, and are therefore allowable.

Claims 3 and 10 recite the activation signal in step a) is transmitted by pressing at least two buttons on the remote transmitter. The advantage of having to press at least two buttons (e.g., sequentially or simultaneously) is so that an unintentional activation of a significant vehicle system, such as a remote engine start operation, is not accidentally initiated. For example, the accidental contact of a single button of a remote fob may occur when the transmitting device is in a user's pocket or carrying bag. The requirement of having to press at least two respective buttons (e.g., sequentially or simultaneously) reduce the likelihood of an unintentional activation. The Office action refers to reference numerals 52-54 in Fig. 1 of Flick to suggest the at least two button activation. Reference numerals 52-54 represent buttons disposed on the face of the fob. The mere presence of various buttons on the fob does not suggest that activation of a vehicle function requires pressing at least two buttons. Fobs are known to have a plurality of

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buttons disposed on its face with each switch activating a single respective vehicle function. There must be some description or teaching in Flick that suggests that a remote vehicle function activation is performed by pressing at least two buttons other than the presence of a plurality of buttons on the face of the fob. Flick and Kominami fail to describe, teach, or even suggest transmitting an activation signal by pressing at least two buttons on the remote transmitter. Therefore, claims 3 and 10 are allowable.

Claims 4 and 11 recite for each button pressed, the transmitter transmits a unique RF message to complete the activation signal. The Office action references Flick, col. 5, lines 41-47, to suggest the recited limitations. Col. 5, lines 41-47 only describe a housing having a door lock button, a door unlock button, a trunk release button, and a panic button that may be provided on the rear of the housing. Flick fails to describe a unique RF message transmitted to complete the activation signal in response to each button pressed. Therefore, claims 4 and 11 are allowable.

Claim 5 recites that steps c) and d) are repeated at least once prior to performing step e). Kominami describes the repeated transmission between two wireless devices (i.e., transceivers). Kominami does not describe or suggest the transmission along a communication bus between the receiver and a controller of the vehicle. Kominami and Flick fail to describe or suggest the limitations of claim 5. Therefore, claim 5 is allowable.

Claims 6, 7, 12, and 13 depend from claims 1 and 8, respectively, and are therefore allowable.

Claim 14 recites a communication bus is a multiplex two-wire communication bus. Flick fails to describe a two-wire communication bus, or more generally, a communication bus coupled between the receiver 24 and the controller 23. The two wire communication bus, of the present invention, transmits and controls multiple data packages transmitted between a plurality of related and non-related devices/systems within the vehicle. The present invention aims to prevent the error that can occur in the communication bus while transmitting data along the communication bus 22 between the receiver

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module 24 and the control module 24 within the vehicle. An erroneous message between two devices (due to a communication error resulting from data collision within the communication bus) may result in inadvertent activation of a vehicle system, such as the remote engine start operation, which if unknown to the vehicle operator, may result in depletion of fuel within the vehicle. Flick and Kominami fail to describe or suggest the limitations of claim 14. Therefore, claim 14 is allowable.

Claim 16 recites the receiver module and the powertrain control module transmit the request acknowledgement message and the confirmation message at least twice. The Office action references Kominami, col. 5 lines 21-28, to suggest transmitting the request message and confirmation message at least twice between the receiver module and the powertrain control module; however, the transmission as referred to in this referenced section is a wireless communication between a transceiver of a remote PDA and a transceiver of a controller. A powertrain control module is not described or suggested nor is a communication bus described or suggested. Kominami and Flick fail to describe or suggest the limitations of claim of claim 16. Therefore, claim 16 is allowable.

Claim 18 recites the activation signal is transmitted by pressing at least two pushbuttons simultaneously on the remote transmitter. The Office action references Flick, col. 7 lines 60-65, to suggest pressing the two pushbuttons simultaneously. However, Flick describes depressing the same button "x" amount of times. This does not teach or suggest pressing two pushbuttons simultaneously, as only a same button is pressed in Flick. Flick and Kominami fail to describe or suggest the limitations of claim of claim 18. Therefore, claim 18 is allowable.

Claim 19 recites the activation signal is transmitted by pressing the at least two pushbuttons sequentially on the remote transmitter. Flick only describes depressing the same button "x" amount of times. This does not teach or suggest pressing two pushbuttons sequentially, as only a same button is pressed in Flick. Flick and Kominami fail to describe or suggest the

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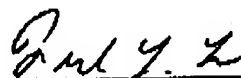
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limitations of claim of claim 19. Therefore, claim 19 is allowable.

In view of the foregoing amendment and remarks, all pending claims are in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

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